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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/724,375

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Zhi-Min Choo

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35884

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LEE, HONG, DEGERMAN, KANG & SCHMADEKA

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EXAMINER

BEMBEN, RICHARD M

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/724,375

Applicant(s)

CHOO, ZHI-MIN

Examiner

RICHARD M. BEMBEN

Art Unit

2622

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 4-10, 12, 13 and 15-22 is/are rejected.
- 7) ☒ Claim(s) 3, 11 and 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12 May 2008 has been entered.

Response to Arguments

2. Applicant's arguments with respect to independent claims 1, 12 and 20 have been considered but are moot in view of the new ground(s) of rejection.
3. Examiner acknowledges and accepts amendments to the specification dated 17 April 2008. Therefore, the objection to the specification in Final Office Action dated 25 January 2008 is withdrawn.
4. Regarding the double patenting rejections of claims 1 and 4 in Final Office Action dated 25 January 2008, examiner acknowledges and accepts the amendments to claim 1. Therefore, the double patenting rejection is withdrawn.
5. Regarding the Official Notice taken in claim 12: "To adequately traverse such a finding, an applicant must specifically point out the supposed errors in the examiner's action, which would include stating why the noticed fact is not considered to be common knowledge or well-known in the art [...]. If applicant does not traverse the examiner's

assertion of official notice or applicant's traverse is not adequate, the examiner should clearly indicate in the next Office action that the common knowledge or well-known in the art statement is taken to be admitted prior art because applicant either failed to traverse the examiner's assertion of official notice or that the traverse was inadequate." See MPEP § 2144.03 [R-1]. Therefore, since the applicant did not specifically point out the supposed errors in the examiner's action (i.e. challenge the examiner's contention that it would be a well-known design choice to allow image inversion when magnetic flux was not detected) the (Official Notice) common knowledge or well-known in the art statement is taken to be admitted prior art.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 1, 4-9, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,882,726 (issued to Kim) in view of US Patent No. 5,903,706 (issued to Wakabayashi et al., hereinafter "Wakabayashi") in further view of US Patent No. 6,992,699 (issued to Vance et al., hereinafter "Vance").**

Regarding **claim 1**, Kim discloses a mobile communication terminal (*refer to c. 3, l. 45 – c. 4, l. 2 and Figures 1 and 2*), comprising:

a photographic apparatus rotatably and externally connected to the terminal (refer to c. 3, ll. 55-59, c. 4, ll. 15-19, c. 5, ll. 26-31 and Figures 1-3, "lens housing 30"); and a display (refer to c. 3, ll. 63-64). However, Kim does not disclose that the display is for reproducing an image captured by the photographic apparatus. Further, Kim does not disclose a sensor connected to the photographic apparatus, wherein the image is inverted when the sensor is triggered and rotation of the photographic apparatus at a predetermined angle, such that the photographic apparatus is directed in substantially the same direction as the display, triggers the sensor.

Wakabayashi discloses a photographic apparatus rotatably and externally connected to a body (refer to c. 4, l. 44 - c. 5, l. 45, Figures 1-3 & 10-16, rotatable "video camera unit 5"). Wakabayashi further discloses a display reproducing an image captured by the photographic apparatus (refer to c. 4, ll. 45-46, c. 5, ll. 43-45 and Figures 1, 10 & 11, "liquid crystal display 6"). Wakabayashi further discloses a sensor (in the form of a mechanical switch) connected to the photographic apparatus, wherein the image is inverted when the sensor is triggered and rotation of the photographic apparatus at a predetermined angle, such that the photographic apparatus is directed in substantially the same direction as the display, triggers the sensor (refer to c. 8, l. 27 - c. 9, l. 8, c. 9, l. 39 - c. 10, l. 7 and Figures 17-21, "switches 80, 81, 82" are triggered by "protrusion 87"; also refer to c. 2, ll. 32-36, c. 3, ll. 8-39 discussing inverting the displayed image when the camera faces the display). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to invert a displayed image when a rotatable camera is rotated in substantially the same direction

as the display as disclosed by Wakabayashi in the mobile communication terminal disclosed by Kim such that displayed images are right-side up on the display (as discussed by Wakabayashi). However, Kim in view of Wakabayashi does not disclose that the sensor that triggers image inversion is a magnet connected to the photographic apparatus, the magnet generating a magnetic flux; and a magnetic flux sensor connected to the terminal, wherein the magnetic flux sensor detects the magnetic flux.

Vance discloses a mobile communication terminal (*refer to c. 2, ll. 30-42 and Figure 1*) comprising a rotatable photographic apparatus (*refer to c. 4, ll. 24-37*) wherein a position sensor detects the position of the photographic apparatus and a displayed image may inverted based on the position sensor output (*refer to c. 4, ll. 33-37*). Vance further discloses that the position sensor can be a mechanical switch (similar to Wakabayashi) or could also be a magnetic position sensor (*refer to c. 4, ll. 38-56*). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to invert a displayed image using a magnetic position sensor as disclosed by Vance in the mobile communication device disclosed by Kim in view of Wakabayashi such that displayed images are right-side up on the display (as discussed by Wakabayashi).

Regarding **claim 4**, refer to the rejection of claim 1 and Wakabayashi further discloses that the inverted image is reproduced on the display (*refer to c. 5, ll. 10-15, c. 5, ll. 40-45*).

Regarding **claim 5**, refer to the rejection of claim 1 and Kim further discloses that the terminal is a folding type mobile communication terminal (*refer to c. 3, ll. 45-48*), further comprising:

a lower body (*refer to c. 3, l. 45 - c. 4, l. 20 and Figures 1 & 2, "body housing 10"*);

an upper body having a lower surface (*refer to c. 3, l. 45 - c. 4, l. 20 and Figures 1 & 2, "folder 20" – lower surface is below "earpiece 210"*);

a hinge connection element rotatably connecting the lower body to the upper body (*refer to c. 3, l. 45 - c. 4, l. 20 and Figures 1 & 2, "hinge means H"*);

a circuit board installed in the lower body (*refer to c. 5, ll. 24-37 and Figure 3*), wherein the display is installed on the lower surface of the upper body (*refer to c. 3, l. 45 - c. 4, l. 20 and Figures 1 & 2, "liquid crystal display 220"*).

However, Kim does not disclose that wherein the circuit board receives a signal emitted by the magnetic flux sensor to invert the image.

Refer to the rejection of claim 1 and Vance further discloses a circuit board that receives a signal emitted by the magnetic flux sensor to invert the image (*refer to c. 4, ll. 38-56*). It would have been obvious to one having ordinary skill in the art at the time of the invention that the printed circuit board (which operates the mobile communication device) receives the signal emitted by the magnetic flux sensor as disclosed by Vance in the mobile communication device disclosed by Kim in order to use a position sensor to automatically invert an image.

Regarding **claim 6**, refer to the rejection of claim 5 and Kim further discloses that the photographic apparatus is rotatably connected to the terminal at the hinge connection element (*refer to c. 4, ll. 3-19 and Figures 1-3*).

Regarding **claim 7**, refer to the rejection of claim 6 and Vance further discloses that the magnetic flux sensor is connected to the circuit board (*refer to c. 3, ll. 20-25 and c. 4, ll. 38-56*).

Regarding **claim 8**, refer to the rejection of claim 6 and (considering Vance) it is inherent that the magnet is connected to an inner surface of the photographic apparatus so that the magnet can rotate with the photographic apparatus and rotation is not disrupted, i.e. if the magnet were placed on the outside surface it would disrupt rotation.

Regarding **claim 9**, refer to the rejection of claim 8 and (considering Vance) it is inherent that the magnet's outer surface approximates the inner surface that it is connected to in order for the magnet to sit/connect flush to the photographic apparatus' surface.

Claim 20 is a method claim corresponding to apparatus claim 1. Therefore, claim 20 is analyzed and rejected as previously discussed with respect to claim 1.

Regarding **claim 21**, refer to the rejection of claim 1 and Wakabayashi further discloses that when a lens of the photographic apparatus is positioned to face a user of the terminal, the image captured by the photographic apparatus is inverted to be correctly reproduced on the display (*refer to c. 3, ll. 8-39 and c. 9, l. 39 - c. 10, l. 7*).

8. Claims 10, 12, 13, 15-19 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,882,726 (issued to Kim) in view of US Patent No. 5,903,706 (issued to Wakabayashi et al., hereinafter “Wakabayashi”) in further view of US Patent No. 6,992,699 (issued to Vance et al., hereinafter “Vance”) and the applicant’s admitted prior art (AAPA).

Regarding **claim 10**, Kim in view of Wakabayashi in further view of Vance disclose the limitations required by claim 9. However, Kim in view of Wakabayashi in further view of Vance does not disclose that an adhesive fixedly secures the magnet to the photographic apparatus.

AAPA discloses that it notoriously well-known to connect two materials (the magnet and the photographic apparatus) with an adhesive. Therefore, it would have been obvious to connect the magnet and the photographic apparatus with an adhesive as is well known in the art in the mobile communication terminal disclosed by Kim in view of Wakabayashi in further view of Vance in order to secure the magnet to the photographic apparatus.

Regarding **claims 12 and 13**, Kim in view of Wakabayashi in further view of Vance disclose the limitations of claim 1 however do not disclose that the image is inverted when magnetic flux is not detected.

AAPA discloses that it is a well-known design choice to reverse the parts; in this case to allow image inversion when magnetic flux is not detected. See MPEP 2144.04 [R-1] (VI)(A). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to allow image inversion when magnetic flux is not detected,

which is a simple design choice, in the mobile communication terminal disclosed by Kim in view of Wakabayashi in further view of Vance because as long as the product designers can determine the amount rotation/orientation of the photographic apparatus based on the presence or absence of the detection of magnetic flux, a decision for or against image inversion can be made.

Also refer to the discussion above.

Regarding **claim 15**, refer to the rejection of claim 12 and Wakabayashi further discloses that the inverted image is reproduced on the display (*refer to c. 5, ll. 10-15, c. 5, ll. 40-45*).

Regarding **claim 16**, refer to the rejection of claim 12 and Kim further discloses that the terminal is a folding type mobile communication terminal (*refer to c. 3, ll. 45-48*), further comprising:

- a lower body (*refer to c. 3, l. 45 - c. 4, l. 20 and Figures 1 & 2, "body housing 10"*);

- an upper body having a lower surface (*refer to c. 3, l. 45 - c. 4, l. 20 and Figures 1 & 2, "folder 20" – lower surface is below "earpiece 210"*);

- a hinge connection element rotatably connecting the lower body to the upper body (*refer to c. 3, l. 45 - c. 4, l. 20 and Figures 1 & 2, "hinge means H"*);

- a circuit board installed in the lower body (*refer to c. 5, ll. 24-37 and Figure 3*),
wherein the display is installed on the lower surface of the upper body (*refer to c. 3, l. 45 - c. 4, l. 20 and Figures 1 & 2, "liquid crystal display 220"*).

However, Kim does not disclose that wherein the circuit board receives a signal emitted by the magnetic flux sensor to invert the image.

Refer to the rejection of claim 12 and Vance further discloses a circuit board that receives a signal emitted by the magnetic flux sensor to invert the image (*refer to c. 4, ll. 38-56*). It would have been obvious to one having ordinary skill in the art at the time of the invention that the printed circuit board (which operates the mobile communication device) receives the signal emitted by the magnetic flux sensor as disclosed by Vance in the mobile communication device disclosed by Kim in order to use a position sensor to automatically invert an image.

Regarding **claim 17**, refer to the rejection of claim 16 and Kim further discloses that the photographic apparatus is rotatably connected to the terminal at the hinge connection element (*refer to c. 4, ll. 3-19 and Figures 1-3*).

Regarding **claim 18**, refer to the rejection of claim 17 and Vance further discloses that the magnetic flux sensor is connected to the circuit board (*refer to c. 3, ll. 20-25 and c. 4, ll. 38-56*).

Regarding **claim 19**, refer to the rejection of claim 17 and (considering Vance) it is inherent that the magnet is connected to an inner surface of the photographic apparatus so that the magnet can rotate with the photographic apparatus and rotation is not disrupted, i.e. if the magnet were placed on the outside surface it would disrupt rotation.

Regarding **claim 22**, refer to the rejection of claim 21 and following the same logic use in the rejection of claim 12 it would have been obvious to not invert the image on the display.

Allowable Subject Matter

9. Claims 3, 11 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RICHARD M. BEMBEN whose telephone number is (571)272-7634. The examiner can normally be reached on 8:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on (571) 272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David L. Ometz/
Supervisory Patent Examiner, Art
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RMB